EXHIBIT Q



UNITED STATES SECURITIES & EXCHANGE COMMISSION NORTHEAST REGIONAL OFFICE

Bernard L. Madoff Investment Securities, LLC Bernard Madoff Interview Section III-

Staff: William Ostrow and Peter Lamore

Objective: Discuss Bernard L. Madoff's ("Madoff") business in relation to hedge fund

articles written about the firm.

Summary:

The staff conducted an interview on May 25, 2005 with Bernard Madoff ("BMadoff"), Chairman, to discuss Madoff's business in relation to two articles written about the firm in Marhedge and Barrons in 2001. Before the articles were mentioned to BMadoff by the staff, he stated that the firm did not conduct any management of outside money, nor did the firm serve as an Investment Advisor or provide any investment advice. ¹

When the staff mentioned the Marhedge and Barrons articles, BMadoff stated "we do execute trades on behalf of brokerage firms and institutions which include a number of hedge funds. They use a model (algorithm) that we developed." Initially, BMadoff stated there were four hedge funds using the model including Fairfield Sentry, Thema, Tremont, and Kingate Global. Subsequently, BMadoff stated there were approximately 15 entities including the four hedge funds and two corporate accounts using the model. The Trading Directive agreements between Madoff and these entities will be provided by the firm. BMadoff stated that all investors are foreign investors and the accounts are all DVP/RVP. Madoff provides these entities with trade confirmations and month-end account statements which include all trading activity. The staff will select a timeperiod and review the account statements generated during this timeperiod. According to BMadoff, he is not an investor in any of these entities and he does not use the model to trade the firm's capital.

BMadoff developed the model approximately eight years ago and is the only individual authorized to execute trades on behalf of the 15 entities using the model. The model operates on a computer server separate from the rest Madoff's market-making and proprietary trading business.⁴ The model attempts to replicate the S&P 100 using a basket

¹ During an interview on April 28, 2005 with BMadoff, Peter Madoff, Chief Compliance Officer and David Kugel, Trading Floor Compliance Supervisor, the staff asked BMadoff if the firm has ever managed outside money. BMadoff stated "No, we are not that kind of firm."

² According to BMadoff, Fairfield Sentry is affiliated with Citco, Tremont is affiliated with Bank of America, and Thema and Kingate Global are affiliated with HSBC.

³ BMadoff stated these agreements were the only written correspondence between Madoff and these

⁴ The staff confirmed with BMadoff that the server is completely separate from the firm's Madoff Integrated Support System ("MISS") and the firm's automated market-making system nicknamed Robe.

of approximately 50 securities contained within the S&P 100. This basket-trading strategy is a long only strategy according to BMadoff. While the model does not incorporate shortselling, there is an attempt to "time the market" to maximize investment returns. According to BMadoff, the title of the strategy used by the model is split-strike conversion, which insinuates a strategy that uses options. However, BMadoff stated the model stopped using options approximately one year ago. The entities that allocate capital to the model cannot adjust the model, only the amount of capital allocated to it. The model has two aspects. One, it must identify the appropriate securities and number of shares of these securities to most closely replicate the S&P 100. Two, the model suggests the timing of entering and exiting the market using momentum signals. BMadoff was adamant that he also uses his "gut feel" to enter and exit the market. According to BMadoff, the shares are executed in Europe before the 9:30 am opening of the U.S. equity markets using various brokerage firm's who bid or offer on the securities in the basket in an "auction system" format. While in the past, the model could implement the strategy in one day, now it can take three to five days. While other firms may have a similar strategy, BMadoff stated that the speed at which the strategy can be executed and the high correlation the basket has with the S&P 100 are the major components of the model's competitive advantage. 5 BMadoff stated the returns for the strategy since inception have been between 10% and 15% per year.

According to BMadoff, there was approximately six to seven billion dollars allocated to the model by the 15 entities in April, 2005. The firm's compensation for conducting this business is four cents per share, which is incorporated in the execution price. The revenue generated from this business is reflected in the "Other Trading" line item of the firm's FOCUS Report.

BMadoff explained that due to the compensation structure of this business, he does not consider himself an Investment Advisor. Therefore, he did not state that the firm managed outside money when previously questioned by the staff.

BMadoff was surprised that the staff was unaware that Madoff conducted this type of business since he had discussions regarding the firm's hedge fund relationships with SEC officials approximately one and one-half years earlier.⁷

⁵ This seems to contradict his earlier statement that it may take three to five days to implement the strategy.

⁶ BMadoff stated that all entities are charged four cents per share.

⁷ BMadoff stated he had communicated with Lori Richards and John McCarthy regarding the firm's hedge fund relationships. BMadoff stated that he would provide a copy of the correspondence between Madoff and the SEC regarding the matter.

EXHIBIT R

FW: Madoff Report - I hope this works

Page 1 of 1

11/4/2005 9:43:00 AM

Fw: Madoff Report - I hope this works

From: Bachenhelmer, Doria G.

To: Cheung, Meaghan S. [CheungM@SEC.GOV]; Suh, Simona Attachments: BMadoff05nc.doc.zlp

In case you couldn't open the other version

From: Sollazzo, Robert A.

Sent: Friday, November 04, 2005 9:43 AM

To: Bachenheimer, Doria G.

Subject: Madoff Report - I hope this works

<<...>>

Bernard L. Madoff Investment Securities LLC 885 Third Ave New York, NY 10022 Exam #BD2005NERO065 CRD #2625 File #8-8132

September 2, 2005

COMMENTS

The staff conducted a cause examination of Bernard L. Madoff Investment Securities LLC ("BLM"), a broker-dealer located in New York, New York. Interviews with Bernard Madoff ("BMadoff), President, Peter Madoff ("PMadoff"), Chief Compliance Officer, Trading Floor Compliance, Shana Madoff ("SMadoff"), Compliance Counsel, Mark Madoff ("MMadoff"), Director of Market Making, Andrew Madoff ("AMadoff"), Director of Proprietary Trading, and an examination of all pertinent books and records revealed the following:

I. SUMMARY OF MAJOR FINDINGS AND DISPOSITION

The staff's examination disclosed that on three occasions the firm violated National Association of Securities Dealers ("NASD") <u>Rule 2320</u> (Best Execution and Interpositioning) by failing to obtain best execution on customer limit orders. This finding has already been conveyed to the firm during an exit conference, and a violation letter will be sent to the firm detailing the deficiencies noted and requesting a response outlining corrective action taken by the firm.

The staff also detected an emerging trend worthy of note. According to BMadoff, Market Making firms, including BLM, are presently designing, building, and refining sophisticated technology systems to effectively replace human traders. These technology systems use algorithms and artificial intelligence to determine whether to execute customer orders from firm inventory or by rerouting the orders to another firm or an exchange. BLM's automated trading function is named Robo and has evolved into a consistently profitable system.

II. BACKGROUND

BLM has been registered with the NASD since March 25, 1960 and is wholly owned by BMadoff. The firm employs 161 employees, including 75 Registered Representatives ("RR's") and 86 unregistered employees. Of the RR's, approximately 33 are market makers / market making ("MM's") and assistant MM's, 18 are proprietary traders/proprietary trading ("PT's") and assistant PT's, 12 interact with clients regarding client orders, and 12 serve as trading activity supervisors and managers. Of the unregistered employees, approximately 44 work in systems and technology. The firm is affiliated with Madoff Securities International Limited ("MSIL"), a PT firm located in London that trades primarily European equities. Although MSIL's capital is provided by BMadoff and family, the management and operations are

completely separate from BLM according to BMadoff. MSIL is regulated by the United Kingdom's Financial Services Authority ("FSA").

BLM's three revenue generating departments include MM, PT, and an investment advisory ("IA") business.¹ As a percentage of overall revenues, the firm's IA business has been the highest revenue generating department since 2001.²

The firm operates pursuant to Rule 15c3-1(a)(2)(i) and is primarily self-clearing. According to the firm's Operating Statement ending October 31, 2004, the firm reported year-to-date net income of \$37,235,700. The firm generated its net income from the following revenue:

All Other Trading	\$84,800,800	73%
Market Making	19,100,100	17%
Other Income	7,000,000	6%
Trading in Debt	<u>4,900,000</u>	<u>4%</u>
Total	\$115,800,900	100%
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A further breakdown of All Other Trading revenues provided by the firm revealed that approximately \$73.8 million was generated from the firm's IA business. The IA business has approximately 16 clients and entails determining when to deploy capital allocated to this business by these clients and how to best execute the associated securities transactions. BLM is compensated from the clients by charging them four cents per share executed. BLM refers to this compensation arrangement as "commission equivalents." As of June 1, 2005, the total assets allocated to the firm's IA business were approximately \$8 billion. The bulk of this money belongs to hedge funds (or funds of funds) such as Fairfield Sentry Limited and Kingate Global Fund. BLM's trading authority for these broker-dealer customers has led BMadoff to be described as one of the largest hedge fund managers or money managers in the business. BMadoff does not hold himself out to be a hedge fund manager however, and does not advertise himself as such. He considers these hedge funds, or funds of funds, to be solely broker-dealer customer accounts over which he has trading authority and from which he receives commission income.

III. EXAMINATION PURPOSE and SCOPE

The staff's examination of BLM focused on allegations made against BLM which were found in two e-mails between pressure and adviser #1 employees. These e-mails were

¹ BMadoff is the only individual authorized to initiate orders on behalf of the IA business clients. BMadoff would not acknowledge this business as an IA due to the compensation and administrative structure of the business. BMadoff refers to this department as an Institutional Execution Trading Platform, as noted in a letter to Eric Swanson ("Swanson") of the SEC's Office of Compliance Inspections and Examinations Division ("OCIE") dated January 16, 2004.

² The firm's fiscal year ends on October 31. In 2002, the firm generated \$146 million in revenues (29% MM, 25% PT and 46% IA business). In 2003, the firm generated \$132 million in revenues (23% MM, 12% PT and 65% IA business). In 2004, the firm generated \$116 million in revenues (19%MM, 17% PT and 64% IA business).

discovered by NERO's IA staff while conducting an examination of the in 2004. One of the e-mails mentioned that "an ex-Madoff trader said that Madoff cherry-picks trades and takes them for the hedge fund." The e-mail also questioned the compensation structure of the business. Specifically, "why does he (BMadoff) allow us to make so much money?" Another suspicious line contained in the e-mail was, "The point is that as we don't know why he does what he does we have no idea if there are conflicts in his business that could come to some regulator's attention." The second e-mail stated, "We at Renaissance have totally independent evidence that Madoff's executions are highly unusual."

In addition to these two e-mails, two articles were written about BLM in Barron's and MARHedge in May 2001.³ These articles questioned the firm's ability to generate consistently positive returns for its IA business with minimal volatility. The two articles written about BLM's IA business, which both referred to as a hedge-fund business, discussed the peculiar secretiveness, enormous size, and unusually strong and consistent returns of the capital managed by BLM on behalf of hedge funds. In addition, both articles raised suspicion of possible wrongdoing that enables the returns to be unusually strong and consistent. Specifically, the articles contain allegations that BLM's MM operation may subsidize and smooth the returns of the hedge fund's performance. Also, the articles contain allegations that BLM's customer order flow from its MM business provides access to information that enables the timing of trades for the hedge fund business to be optimized.

The staff's examination consisted primarily of analyzing and comparing BLM's proprietary trading and IA trading to its customer order flow business for the purpose of identifying instances of front-running or similar violative activity.

IV. RISK ASSESSMENT

BMadoff and his firm, BLM, were pioneers in the area of payment for order flow and third market execution, whereby exchange listed securities could be executed "away" from the exchange. While BMadoff's payment for order flow business has dropped dramatically, BLM still receives a large amount of customer order flow. The staff was concerned that BLM might be using customer order flow information to improve the returns of its IA and/or proprietary business by front-running customer orders or otherwise using customer's order flow information.

V. <u>EXAMINATION FINDINGS</u>

A. BLM's IA/ "Hedge Fund" Business

a. Barron's and MARHedge Articles

Two articles were written about BLM's IA business in MARHedge and Barron's in May 2001. Both articles referred to the IA business as a hedge-fund business. The basis of both articles was

³ MARHedge is a hedge fund industry trade publication.

the peculiar secretiveness, enormous size, and unusually strong and consistent returns of the capital managed by BLM on behalf of hedge funds. In addition, both articles raise suspicion of possible wrongdoing that enables the returns to be unusually strong and consistent. Specifically, the articles allege that BLM's MM operation may economically subsidize and smooth the returns of the hedge fund's performance and BLM's customer order flow from its MM business provides access to information that enables the timing of trades for the hedge fund business to be optimized.

The Barron's article was written by Erin Arvedlund ("Arvedlund") and published on May 7, 2001. In this article, Arvedlund notes that few individuals on Wall Street know that BMadoff manages billions of dollars for wealthy individuals. BMadoff would not explain his trading strategy in detail to the author, citing its proprietary nature. Arvedlund notes that the accounts have produced a compound average annual return of 15% for more than a decade and that Madoff's "hedge fund" has never had a down year. The returns have been so consistent that some on the Street have begun speculating that BLM's MM operation subsidizes and smooths his hedge-fund returns.

According to the article, the strategy used by Madoff is known as "split-strike conversion." In layman's terms, it means that Madoff invests primarily in the largest stocks in the S&P 100 index such as General Electric, Intel, and Coca-Cola and at the same time, he buys and sells options against those stocks to create a boundary on the stock, limiting its upside while at the same time protecting against a sharp decline in the share price. When done correctly, this so-called market-neutral strategy produces positive returns no matter what way the market goes.

Arvendlund explained that BLM stands in the middle of a tremendous river of orders, which means that its traders have advance knowledge, if only by a few seconds, of what the big customers in the market are buying and selling. And by using this information, the firm might be able to make profitable trades. As such, throwing a little cash back to the hedge funds would be no big deal. And the funds' consistent returns, in turn, attract more capital. Madoff dismissed this scenario as "ridiculous." Adding further mystery to Madoff's motives is the fact that he charges no fees for his money management services. He is quoted as saying "we're perfectly happy to just earn commissions on the trades."

According to Arvendlund, even knowledgeable people really can't tell what he's doing. People who have all the trade confirms and statements still can't define the strategy very well. According to one investor, the only thing is that he's often in cash when volatility levels get extreme. This investor declined to be quoted by name because Madoff requests that his investors not reveal that he runs their money. According to the investor, Madoff told them "If you invest with me, you must never tell anyone that you're invested with me. It's no one's business what goes on here." When one investment manager took over a pool of assets that included assets managed by BMadoff he asked for an explanation of the strategy. When BMadoff couldn't explain to his satisfaction how they were up or down in a particular month, he pulled the money from BMadoff's management.

⁴ According to BMadoff, the strategy stopped utilizing options as of January 1, 2004 because it became too difficult to implement.

The MARHedge article similarly discusses the large size of the fund, the consistent positive returns month after month and year after year, and goes into detail about the split-strike conversion strategy. The article mentions that the best known entity using a similar strategy is the publicly traded mutual fund called Gateway. However, the Gateway's fund's performance has experienced far greater volatility and lower returns during the same period.

As in the Barron's article, BMadoff refused to provide details about the strategy to MARHedge because he considers the information proprietary. However, BMadoff pointed out that the split-strike conversion strategy is designed to work best in bull markets and "we've really been in a bull market since 1982, so this has been a good period to do this kind of stuff." The worst market to operate in using the strategy, he stated, would be a protracted bear market or a flat, dull market.

BMadoff informed the staff that, market timing and stock picking are both important areas for the strategy to work. BMadoff pointed to his vast experience, excellent technology that provides superb and low cost execution capabilities, good proprietary stock and options pricing models, a well-established infrastructure, MM ability and market intelligence derived from a massive amount of order flow.

BMadoff states in the article that the strategy and trading are done mostly through a proprietary "black box" system that allows for human intervention to take into account the "gut feel" of the firm's professionals. According to BMadoff, setting up a PT operation strictly for the strategy, or a separate asset management division in order to collect the incentive fees, would conflict with the firm's primary business of MM. BMadoff states that "we're perfectly happy making the commissions" by trading for the funds.

Madoff dismisses speculation concerning the use of the capital as "pseudo equity" to support the firm's MM activities or provide leverage. He says the firm uses no leverage, and has more than enough capital to support its operations.

b. IA Business Structure

BLM's IA business was launched in the late 1980s. The concept of this business was to provide investors with an investment strategy that generated similar returns to the Standard and Poor's ("S&P") 100, but with inherently less volatility. In order to achieve similar performance returns with less volatility, the strategy utilized options in past years and at times invests 100% in cash equivalent instruments in anticipation of a declining U.S. equities market.

From inception of the business until January 2004, the title of the investment strategy was split-strike conversion. This strategy entails simultaneously performing three steps. First, a group or basket of equity securities that is intended to highly correlate to the S&P 100 Index is purchased. Second, out-of-the-money S&P 100 Index call options are sold in an equivalent contract value dollar amount to the basket of equity securities purchased. Finally, using the proceeds from the sale of the out-of-the money S&P 100 Index calls, S&P 100 Index put options are purchased in an equivalent contract value dollar amount to the basket of equity securities purchased. The strategy effectively creates "a zero cost collar" which allows the basket's value to increase somewhat in a rising S&P 100 Index, while reducing the downside risk of the basket's value in a

declining S&P 100 Index.⁵ According to BMadoff, due to the complexity of incorporating options into the investment strategy, the IA business stopped utilizing options as of January 1, 2004.⁶ Thus, the strategy from January 1, 2004 to present has effectively become akin to a managed S&P 100 fund. According to BMadoff, in order to eliminate any perception of a conflict of interest between the IA business and BLM's MM and PT businesses, all orders for the IA business are executed in foreign markets during non-core U.S. market times. The staff reviewed the IA department's Order Entry Execution History ("OEEH") for January 2005. According to this document, all orders and executions took place between 2:59 am and 8:57am. This report supports BMadoff's assertion that all orders are placed and executed outside of core U.S. trading hours of 9:30am to 4:00 pm.

As of June 1, 2005, 16 entities had allocated approximately \$8 billion to the strategy. These entities manage all the administration and marketing required to attract and maintain the underlying investors. According to BMadoff, it is his understanding that these entities usually charge investors a management and performance fee. However, BLM does not receive any of these management or performance fees. As previously noted, BLM's only compensation is through charging four cents per share traded, which he refers to as a "commission equivalent" charge. In 2004, approximately 1.8 billion shares were traded for the IA business resulting in approximately \$74 million in revenues.

According to BMadoff, the capital allocated to the strategy is either invested in the strategy (long a basket or baskets of securities mimicking the S&P 100 Index) or in a cash-equivalent account. There are two steps to implementing the strategy. First, BMadoff must believe it is a good time to be long the market. Second, BLM's proprietary model titled MA2.06 must be able to identify a basket of securities that meets the execution parameters set forth in the Trading Authorization

⁵ While the staff does not believe that this strategy is prevalent, the split-strike conversion strategy is used by other investment managers including the Gateway Fund.

⁶ BMadoff stated that the clients may hedge the strategy themselves, but he does not discuss or provide any guidance to clients for hedging this strategy.

⁷ The approximate capital allocated per entity is as follows: Fairfield Sentry Limited \$2.4b; Kingate Global Fund Limited \$2.2b; Thema US Equity Fund \$828m; Kingate Euro Fund LTD \$653m; American Masters Broad Market Prime Fund LP \$634m; American Masters Broad Market Fund LP \$428m; Groupement Financier LTD \$229m; Greenwich Sentry Fund \$162m; Banque SAFRA SA France \$160m; Tremont Broad Market Fund LDC \$120m; Thema Wise Investment LTD \$89m; Kesagami Limited Hong Kong \$20m; Ginco Assurance CO LTD Cayman \$5.2m; Genesis Endowment \$3.4m; Sway Pension Fund \$.5m.

⁸ According to BMadoff, this four cent per share charge usually amounts to approximately 1% of total assets allocated to the strategy over the course of the year.

⁹ BMadoff stated that his decision to be long the market was based solely upon his "gut feel." It should be noted that this is in contradiction to the MARHedge article which explains that his model decides when to enter the market. According to BMadoff, his gut feel incorporates many things including the direction of interest rates, commodity prices, what he reads in various industry publications, the views of industry contacts, etc. During an interview with the staff on June 16, 2005, BMadoff stated that customer order flows to BLM's MM desk were not analyzed to help him decide when to "put on the basket." In BMadoff's opinion, BLM's customer order flows are of no value in predicting the direction of equities. However, he does attempt to gauge the tone of the markets by speaking to his traders regarding customer order flow.

Directive ("TAD") provided to the investing entities. 10 The four primary parameters are as follows:

- The basket shall be no less than 35 U.S. Equities, all of which must be resident within the highest fifty (50) percentile, based on market capitalization, of the S&P 100 Index at the time of order entry.
- The sum of the combined market capitalization of the equities to be executed must be in excess of seventy-five percent (75%) of the total market capitalization, as measured by Standards and Poor's, of the entire S&P 100 index.
- Each equity security shall be dollar weighted proportionally within the portfolio to the market capitalization of the particular issue in the S&P 100 Index at the time of order entry.
- The resulting portfolio, when measured against the S&P 100 Index, shall reflect an overall correlation of .95 to 1. These calculations, using a historical price data feed shall include a minimum of 200 data points that occur within a period of not less than 20 trading days within the trailing 30 day period.

According to BMadoff, a basket of securities must be used to implement the strategy rather than investing directly in the Index through an Exchange Traded Fund ("ETF") due to insufficient liquidity with the ETF. 11

c. Model MA2.06

According to BLM, model MA2.06 is the intellectual property of BLM and BMadoff is responsible for the design and development of the model. As described above, the model has established parameters set forth in the TAD, which cannot be modified

BMadoff is responsible for the supervision of the model and its output. He is the only individual authorized to act upon the model's outputs by initiating orders to buy components of the model's output, along with related sell stop orders. As previously noted, his actions with regard to the model's output and subsequent order activity are bound by the terms and conditions set forth in the TAD.

The connectivity of the model is limited to the following four data feeds: 1) SIAC for Listed Securities, 2) Thompson ONE for NASDAQ securities, 3) Bloomberg Database for historical

¹⁰ It should be noted that the TADs provided to the staff for each investing entity were only signed by BMadoff and not by a representative of the investing entities.

¹¹ The S&P 100 American Stock Exchange ETF symbol is OEF. According to Bloomberg, between June 1, 2004 and June 1, 2005, the average daily volume was approximately 198,000 shares and the average daily price was approximately \$55.56. Thus, the OEF traded approximately \$11 million worth of securities per day on average during this period of time. This analysis supports BMadoff's assertion that there is insufficient liquidity to conduct his strategy using the ETF.

The sell stop orders are not set to be triggered at price levels for individual securities; rather they are set to sell the basket when and if the correlation between the basket and S&P 100 Index fall below the minimum correlation set forth in the TAD.

data and 4) Bloomberg Database for weightings. There are no other internal or external points of access. 13

After BMadoff decides to implement the strategy, based on his market knowledge, the model identifies a basket or multiple baskets that meet the parameters set forth in the TAD, and a Comma Delimited, CSV text file format order file is created by the model and sent to potential contra-brokers. The file is uploaded to MISS, the Madoff Integrated Support System, and transmitted directly to foreign brokerage firms. The firm utilizes Primex, an interactive order and execution system that allows orders to be shown exclusively to brokers of choice, rather than the entire exchange or marketplace. The orders are broken up into small pieces or sliced using a trading algorithm in order to disguise the total order size. As pieces of the basket are filled, the model adjusts the size and prices of the remaining pieces to be filled in order to meet the parameters set forth in the TAD. There are two reasons for which a basket or baskets may be sold. One, BMadoff decides that he wants to be out of the market. Two, the parameters set forth in the TAD are violated and the sell stop orders are automatically executed by the model.

According to BMadoff, MSIL acts as the settlement agent for the orders and Barclays Capital serves as the clearing firm. In addition, each of the 16 entities are provided with trade confirmations and end-of-month statements noting shares bought or sold, prices, and amount debited or credited to their account.

d. Testing

The staff reviewed the firm's OEEH report for Model MA2.06 for January 20, 2005, a date in which a basket of securities was purchased. The staff also reviewed customer statements for January 1, 2004 through April 30, 2005. Using the OEEH report, the staff verified that the order entry and execution times occurred intermittently between 02:59 am and 08:57 am on January 20, 2005. Using customer statements generated for 2005, the staff determined that the strategy was implemented using four baskets between January 20 and January 25, 2005. The clients were allocated shares at an average price and on a pro-rata basis. The client portfolios were adjusted on February 18, 2005, and the baskets were sold between March 10 and March 14, 2005. Whereas the staff expected to see frequent trading activity in the IA business, this review revealed that positions are held for multiple weeks. The extended holding period, and the use of baskets - not individual stocks - somewhat alleviated the staff's concern of front running MM customer order flow to take advantage of short term market movements. Furthermore, analysis of the trading revealed no evidence that BLM was using customer order flow information in any way. 16

¹³ BLM provided the staff with a document evidencing the model's connectivity.

¹⁴ BMadoff stated that he normally selects the basket to be implemented with the highest correlation value to the S&P 100. BLM exclusively uses approximately 54 Foreign Brokerage firms, mainly European firms, to provide liquidity for executing trades. By not showing the orders to the entire marketplace, BMadoff believes that he is better able to control order information leakage.

¹⁵ These are trade dates. Anhaueser Busch Company Inc., Slumberger LTD, and Texas Instruments were sold on February 15, 2005 in an adjustment to the basket.

The staff also conducted a cursory review of the parameters set forth in the TAD and determined that they appear to have been followed. Between January 20, 2005 and March 14, 2005, the total return of the baskets was approximately 3.67% gross. This performance was similar to the S&P 100 index during this time period.

B. Firm Trading and Market Making

a. Background

As previously noted PT, including debt and derivatives, generated approximately \$19.3 million in revenues in 2004. There are 12 PT desks with 19 traders and Assistant Traders that manage a total of 40 accounts. According to BMadoff, some of the desks manage multiple accounts in order to test various strategies and correlations in smaller size before taking larger sized positions in other accounts. While position limits for the 12 trading desks range from \$5 million to \$500 million, 11 of the 12 desks position limits are \$50 million or below. The PT desk strategies include three Equity Long/Short, one Equity Long/Short Retail Sector, one Equity Long/Short Energy Sector, one Mean Reversion/Pairs/Equity Long/Short, one Relative Value Arbitrage, one Value, one Marcro-Economical Directional, one Technical Analysis Directional, and one Mean Reversion/Statistical Arbitrage. The PT desk which uses the Mean Reversion/Statistical arbitrage strategy has the \$500 million position limit.

The firm currently has approximately 33 MM and assistant MM traders that make markets in approximately 545 Listed and 325 NASDAQ securities. As previously noted, of these 33 individuals, four are focused on developing and enhancing the automated computerized MM trading system Robo. Based upon Robo's success as well as BLM's discussions with competitors, the firm believes that eventually all human MM traders will be replaced by automated systems similar to Robo. Because of this trend toward automated MM systems, the staff conducted a detailed review of Robo and a limited review of customer execution quality.

In addition to executing customer orders, Robo uses sophisticated algorithms and artificial intelligence to manage stock inventory levels. As with a human MM, the function of Robo is to fill customer orders and exit inventory positions at the best price possible. In order to help determine optimal inventory levels and the appropriate time to exit positions, Robo uses "agents and sub-agents" nicknamed Jellyfish, Hangman, Utility and Vultures which are overseen by a system titled Godfather. According to the firm, Godfather can be thought of as a traffic cop that regulates the activity of the other agents. Godfather is responsible for managing the interactions between agents, subagents and the marketplace. Godfather manages these interests through the use of internal transfers between different portfolios and by sending orders to the outside marketplace.

The existence of Jellyfish and Hangman is sufficient for a functioning automated MM system. After a customer order is executed, the position is initially placed in Jellyfish. When any individual position becomes too large, it is transferred to Hangman and routed to the marketplace

¹⁶ Of course, this does not preclude the possibility that BLM is somehow "data-mining" its vast history of customer limit orders and comparing and correlating them to long term market and/or economic trends that might evidence themselves weeks, or even months, after the limit orders are placed.

for execution. Utility and Vulture agents use intelligent algorithms to improve the overall performance of the account. Utility agents attempt to optimize the firm's trading with respect to a given class of customer order flow such as oversized orders. A combination of time and ensuing price action is used to determine how to manage this inventory. According to the firm, Vulture agents opportunistically take large, potentially significant profitable positions from Jellyfish and Hangman since these two agents are designed to hold fewer shares. Vultures adjust the amount of time positions are held in order to attempt to maximize the price received for the shares.

While reviewing firm e-mails, the staff discovered several e-mails which discussed the consistent profitability of Robo. One of the most telling e-mails regarding the consistent profitability of Robo was written from to the group e-mail addresses _TradingMgmt and _Robo on December 23, 2004. In this e-mail, states "+81K, another phenomenal week. In addition to our string of no unprofitable weeks dating back to the beginning of February, we now have a string of 7 consecutive weeks over \$50K. This end of year surge has even put us within striking distance of \$2M."

According to the firm, the development of Robo is an evolving process. In an e-mail written on January 3, 2005 from and TradingMgmt, and TradingMgmt, discusses the long term goals for Robo. Specifically, he states "Longer term, we will focus on adding vulture/smart accounts (along the lines of our momentum model) and hopefully find a solution to making Nasdaq stocks more profitable."

b. Testing

The staff reviewed customer and firm orders and executions for Dynamic Materials Corp. ("BOOM"), Ionatron Inc. ("IOTN"), and 8X8 Inc. ("EGHT") for BLM for March 2005. These companies were selected as a result of the firm accounting for a large percentage of the overall trading volume during this month according to Nasdaqtrader.com.

While no instances of front-running or anything similar were found, the staff noted three instances in BOOM trading in which it appeared as though customers received inferior execution prices, in violation of NASD <u>Rule 2320</u>.

The first instance occurred on March 1, 2005 and involved customer limit buy orders and sell stop orders at identical prices not receiving the same price. Instead, as the price of BOOM fell, the customer limit buy orders were executed before the customer sell stop orders causing the sell stop orders to receive a lower execution price than would have been received had the buy and sell orders been matched or crossed. Specifically, there were three customer limit buy orders totaling 1200 shares and two customer sell stop orders totaling 2000 shares all with \$20.00 as the limit price. ¹⁸ Due to the firm having "matching" limit buy orders and sell stop orders, the staff

¹⁸ According to BLM's Guide to Best Execution, sell stop orders will be elected when the NASDAQ Level 1 bid is equal to or lower than the order's "stop" price.

expected to see the limit buy orders and at least 1200 shares of the sell stop orders to be executed at \$20.00. However, while all 1200 shares of the limit buy order were filled at \$20.00, only 200 shares of the 2000 share sell stop orders were filled at \$20.00. Of the remaining 1800 shares, 200 were filled at \$19.91, 700 were filled at \$19.85 and 1000 were filled at \$19.81. The average price of the 2000 share execution was \$19.85. Had 1200 shares of the sell stop orders been crossed with the limit buy orders at \$20.00 and the remaining 800 shares executed at \$19.81, the lowest actual price that any part of the sell stop order received, the average price would have been \$19.92. Therefore, because the sell stop orders were not crossed with the limit buy orders, the customers with the sell stop orders received \$152.00 less on the overall transaction.

The second instance in which a customer received an inferior execution price also occurred on March 1, 2005. Customer one entered a good until canceled sell stop order on February 28, 2005 to sell 350 shares of BOOM at \$19.75. On March 1, 2005, at 9:46:25, the firm bought 300 shares from customer two's market order at \$19.70. This execution by itself should have caused customer one's sell stop order to become a market order. At 9:46:34, customer three sold 500 shares at \$19.65. At 9:46:35, customer one's sell stop order was executed at \$19.55. The staff believes that the lowest price that customer one's sell stop order should have been executed is \$19.65. Executing customer one's order at \$19.55 vs. \$19.65 resulted in customer one receiving \$35.00 less for the transaction.

The third instance of an inferior price execution found by the staff occurred on March 8, 2005. In this case, a sell stop order to sell 500 shares at 28.05 was entered at 12:38:45. At 12:41:32, the firm purchased 100 shares from a different customer at \$27.98. This 100 share purchase by the firm should have made the 500 share sell stop order become a market order. At 12:41:35 the firm executed a 200 share sell stop order at \$27.95. This order had a limit of \$28.00 and had been entered at 12:34:07. At 12:41:41, the firm executed a 2000 share sell stop order with a limit price of \$27.90. Of these 2000 shares, 100 were executed at \$27.95 and 1900 were executed at \$27.87. The 500 share stop order was ultimately executed at 12:42:03 and at a price of \$27.66. The staff believes that the 500 share sell stop order was entitled to be executed prior to the 200 and 2000 share sell stop orders due to its sell stop price being higher than both of these orders. Thus, 300 of the 500 shares should have been executed at \$27.95 and 200 of the 500 shares should have been executed at \$27.91. Because the order was executed at \$27.66 rather than \$27.91, the customer received \$125.00 less on the order.

According to the firm's Stop Order Policy, stop orders will be handled in all cases on a best efforts basis. The firm also states that there is no guarantee that a stop order, once it is elected, will receive an execution at its stop price.

During interviews with BMadoff, PMadoff and the staff was told that stop orders are the most difficult orders for the firm to execute. According to these individuals, all orders are executed manually by traders rather than using MISS to automatically execute the orders. These individuals explained that due to "bad ticks" or execution prices provided by data vendors, stop orders could be inadvertently executed if they were done automatically rather than manually. That is, by manually executing the orders, the trader can verify that the market price for the security has in fact reached the stop price. This prevents the firm from inadvertently executing stop orders and being responsible for correcting errors. The staff suspects the firm is using the "bad tick" reason as an excuse to not program the MISS system. As demonstrated by the three

instances discussed, by allowing the firm's trader to handle the order, customers at times receive inferior execution prices.

VI. <u>E-MAIL REVIEW</u>

The staff reviewed all incoming and outgoing e-mails for five employees for the time period April 1, 2004 through April 20, 2005. These individuals were selected as a result of being the highest profit generating RRs for the time period December 1, 2004 through March 31, 2005. In addition, the staff reviewed all incoming and outgoing e-mails for six different employees and one group e-mail address. These individuals were selected as a result of information gathered throughout the examination, and included technology and system employees so that e-mails relating to customer order flow data-mining might be identified.

The staff conducted a review of approximately 15,000 e-mails by using keywords to identify e-mails for further review. The staff reviewed several e-mails which discussed the NASDAQ data delivery methods and associated fees. These e-mails were carefully examined in order to clarify the staff's understanding of the manner in which NASDAQ data and information is transmitted to end users. One e-mail discussed the NASDAQ opening/closing cross data feed distributor. This e-mail was selected because of the staff's concern that the firm may be obtaining closing cross order imbalance information ahead of other market participants. ²²

VII. CONCLUSION

A violation letter will be sent to the firm detailing the deficiency noted and requesting a response outlining corrective action taken by the firm. A copy of this letter will be forwarded to the NASD.

VIII. SUPERVISORY REVIEW AND APPROVAL

EXAMINATION STAFF

William D. Ostrow, Staff Accountant Peter Lamore, Securities Compliance Examiner

¹⁹ The five individuals included Personal Privacy	
The employee e-mails reviewed included Personal Privacy Law Enforcement Was - Robo(e) madott com	The firm e-mail address reviewed

²¹ A sample of the key words used to conduct the review included hedge fund, Fairfield Sentry, DiPascali, Commission Equivalent, closing cross, Bernie, London, and Bulova.

The staff conducted a conference call with NASDAQ officials on June 29, 2005 to gain an understanding of the process and methods for sending NASDAQ information to end users. The officials explained that NASDAQ sends data and other information to all data feed avenues at the same time. Depending on the avenue chosen by the end user, which is based upon many factors including cost, ease of use, etc., the information could be received at slightly different times by the end users.

REVIEWING OFFICIAL
John Nee, Assistant Regional Director



UNITED STATES SECURITIES AND EXCHANGE COMMISSION

NORTHEAST REGIONAL OFFICE 3 World Financial Center – 4th Floor NEW YORK, N.Y. 10281-1022

in replying please quote NERO-BD-WDO (212) 336-9599

September 2, 2005

Bernard L. Madoff President Bernard L. Madoff Investment Securities LLC 885 Third Ave New York, NY 10022

Dear Mr. Madoff:

The Northeast Regional Office of the Securities & Exchange Commission recently completed a broker-dealer examination of Bernard L. Madoff Investment Securities LLC ("BLM"). The staff's examination disclosed that on three occasions the firm violated National Association of Securities Dealers <u>Rule 2320</u> (Best Execution and Interpositioning) by failing to obtain best execution on customer limit orders for Dynamic Materials Corp. ("BOOM").

The first instance occurred on March 1, 2005 and involved customer limit buy orders and sell stop orders at identical prices not receiving the same price. Instead, as the price of BOOM fell, the customer limit buy orders were executed before the customer sell stop orders causing the sell stop orders to receive a lower execution price than would have been received had the buy and sell orders been matched or crossed. Specifically, there were three customer limit buy orders totaling 1200 shares and two customer sell stop orders totaling 2000 shares all with \$20.00 as the limit price. Due to the firm having "matching" limit buy orders and sell stop orders, the staff expected to see the limit buy orders and at least 1200 shares of the sell stop orders to be executed at \$20.00. However, while all 1200 shares of the limit buy order were filled at \$20.00, only 200 shares of the 2000 share sell stop orders were filled at \$20.00. Of the remaining 1800 shares, 200 were filled at \$19.91, 700 were filled at \$19.85 and 1000 were filled at \$19.81. The average price of the 2000 share execution was \$19.85. Had 1200 shares of the sell stop orders been crossed with the limit buy orders at \$20.00 and the remaining 800 shares executed at \$19.81, the lowest actual price that any part of the sell stop order received, the average price would have been \$19.92. Therefore, because the sell stop orders were not crossed with the limit buy orders, the customers with the sell stop orders received \$152.00 less on the overall transaction.

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¹ According to BLM's Guide to Best Execution, sell stop orders will be elected when the NASDAQ Level 1 bid is equal to or lower than the order's "stop" price.

two's market order at \$19.70. This execution by itself should have caused customer one's sell stop order to become a market order. At 9:46:34, customer three sold 500 shares at \$19.65. At 9:46:35, customer one's sell stop order was executed at \$19.55. The staff believes that the lowest price that customer one's sell stop order should have been executed is \$19.65. Executing customer one's order at \$19.55 vs. \$19.65 resulted in customer one receiving \$35.00 less for the transaction.

The third instance of an inferior price execution found by the staff occurred on March 8, 2005. In this case, a sell stop order to sell 500 shares at 28.05 was entered at 12:38:45. At 12:41:32, the firm purchased 100 shares from a different customer at \$27.98. This 100 share purchase by the firm should have made the 500 share sell stop order become a market order. At 12:41:35 the firm executed a 200 share sell stop order at \$27.95. This order had a limit of \$28.00 and had been entered at 12:34:07. At 12:41:41, the firm executed a 2000 share sell stop order with a limit price of \$27.90. Of these 2000 shares, 100 were executed at \$27.95 and 1900 were executed at \$27.87. The 500 share stop order was ultimately executed at 12:42:03 and at a price of \$27.66. The staff believes that the 500 share sell stop order was entitled to be executed prior to the 200 and 2000 share sell stop orders due to its sell stop price being higher than both of these orders. Thus, 300 of the 500 shares should have been executed at \$27.95 and 200 of the 500 shares should have been executed at \$27.91. Because the order was executed at \$27.66 rather than \$27.91, the customer received \$125.00 less on the order.

We are bringing the deficiencies and/or violations of law described above to your attention for immediate corrective action, without regard to any other action(s) that may result from the examination. You should not assume that the Registrant's activities not discussed in this letter are in full compliance with the federal securities laws or other applicable rules and regulations. The above findings are based on the staff's examination and are not findings or conclusions of the Commission.

Notwithstanding whether the Commission takes any action with respect to the above violations, please advise the staff in writing as to the specific procedures which you have put into effect to guard against any further infractions of the above cited Rules. The staff requests that you submit your written response within 30 days of the date of this letter. In addition, please submit a copy of your response to Passon Procedures.

NASD in New York.

Sincerely,

John M. Nee Assistant Regional Director Broker-Dealer Inspection Program



UNITED STATES SECURITIES AND EXCHANGE COMMISSION

NORTHEAST REGIONAL OFFICE
3 World Financial Center -- 4th Floor
NEW YORK, N.Y. 10281-1022

in replying please quote NERO-BD-JMN (212) 336-0484

September 2, 2005



NASD One Liberty Plaza New York, New York 10006

Dear Mr. Reich:

The result of this office's last examination of Bernard L. Madoff Investment Securities LLC was that the attached violation letter was sent to the firm. This copy is provided to your organization in order to keep you informed of possible problems, which may impact your examination program. In granting access to this information, the Commission has relied upon your assurances that your organization will:

- provide such safeguards as are necessary and appropriate to protect the confidentiality of this information;
- make no public use of the information without prior approval of our staff;
- notify us of any legally enforceable demand for the information prior to complying with the demand, and assert such legal exemptions or privileges on our behalf as we may request; and,
- not grant any other demand or request for the information without prior notice or over our objection.

The files in this matter may contain "financial records" or "customers" of "financial institutions," as those terms are defined in the Right to Financial Privacy Act of 1978 [12 U.S.C. 3401-22]. In the event that another federal agency should seek information from those files from your organization, we urge you to have the federal agency contact us before you provide such information. The Commission makes no recommendation with respect to investigation or prosecution by your organization.

The information to which access has been granted is being retained by the Northeast Regional Office of the Commission. Your representative should contact me at for additional information. I would also appreciate it if you would inform that person in the event that your organization institutes public proceedings based upon information that you obtain as a result of this grant of access.

Sincerely,

John M. Nee Assistant Regional Director Broker-Dealer Inspection Program

Enclosure

EXHIBIT S

BE-FWAL

MEMORANDUM

To:

Eric Swanson

From:

OCIE Staff Attorney

Date:

November 10, 2003

Re:

Examination of Madoff Execution Quality

The Staff recently initiated an investigation into the trading practices of the OTC market maker Bernard L. Madoff Investment Securities, LLC (Madoff or MADF) to determine how customer orders were handled when the market was locked or crossed in the Nasdaq 100 ETF (QQQ). The following is a summary of the conclusions of the Staff upon review of the documents provided by MADF regarding execution quality.

MADF produced trade execution and order data in QQQ from January 6, 2003 to January 10, 2003. The Staff has found numerous and consistent instances of bad executions³ by MADF, resulting in some loss to the customers involved. Surprisingly, the Staff has not found a general correlation between locked or crossed markets and the quality of these executions. In general, the bad executions did occur during locked or crossed markets, but also when the market was stable. Attached are two appendices that gives a more comprehensive overview of the data provided by MADF. Appendix A shows a breakdown of all of MADF's trading, including proprietary trading, giving a list of the problem trades and comparing them to each day's overall trading by MADF. Appendix B shows a breakdown of the trading on each of the five days, giving a list of the problem trades and comparing them to each day's customer trading by MADF.

I. MADF Policies and Procedures

MADF has stated that a comprehensive list of policies and procedures in regards to best executions can be found on their website. In the "Madoff's Guide to Best Execution – Nasdaq Securities" (Best Ex Guide), MADF discloses that they will "instantaneously" expose lots from 100 to 3000 shares to Primex. The Best Ex Guide further states that during openings, MADF will match any executions they get proprietarily while the market is locked in the opening with unexecuted market and marketable limit orders. The Best Ex Guide also claims that "[a]s always, Madoff will never trade ahead of [a customer] order." However, as stated in the

When the bid price is equal to the ask price in a security.

² When the bid price is greater than the ask price of a security.

³ "Bad executions" as used in this memo means executions at a price inferior to the inside bid or ask at the time of execution.

⁴ MADF's data does not mark which orders are for customers and which are for proprietary accounts. After conversations with Shana Madoff and Peter Madoff, the Staff has taken out what the Staff believes to be proprietary trading in Appendix B.

Available at http://www.madoff.com/dis/display.asp?id=353&mode=1&home=1

previous memo on the MADF QQQ Executions, the Staff believes that this is not always the case.⁶

B. Unusual Market Conditions Policy

MADF has condensed their unusual market conditions policy into a "client notice" available on their website. MADF fails to define unusual market conditions, but states that it is "often characterized by inordinate volumes and volatility." It also states that locked and crossed markets will make an order subject to manual verification. MADF points out some of the measures it will take during unusual market conditions, including reducing the size of orders eligible for auto-ex and declining to accept new stop orders (while still honoring existing ones). Unusual markets may also lead to delays in execution reports and multiple execution prices and times for large lots outside the auto-ex size. The Staff has concluded that the vast majority of bad executions have occurred while the market is locked or crossed and thus have occurred while MADF's auto execution system is likely turned off.

II. Poor Quality of Execution

The overall quality of execution in QQQ by the MADF during the five day review period, while bad, is not as bad as the order execution quality of other subjects of this examination. Of the 2806 customer orders executed by MADF in the reviewed period, 359 or 12.8% were executed at a price worse than the inside bid or ask at the time of execution. Taken by share, 538,848 of the 1.8 million shares executed were at a price worse than the NBBO, or 29%. These numbers did vary for each of the five days reviewed, ranging from 43.6% of the shares on January 9th being disadvantaged to 12.2% on January 6th, with most days being closer to the 12.2% number. 9

III. Loss to the Customers

The customers affected by poor execution quality seem to be almost any of MADF's numerous customers. Total loss to these customers for the five day period is almost \$9,818.01. If this is an average week, then taken over a 52-week period total loss to MADF customers in QQQ alone would be over about \$500,000. If a customer sent a trade to MADF in QQQ during the reviewed period, on average that order would be executed at a price \$0.0027 worse than the inside bid or ask. Of all the orders that were executed at prices worse than the inside bid or ask, the average execution was \$0.0182 worse than the inside bid or ask. These numbers again

⁶ See "Madoff Activity in QQQ" dated September 12th 2003.

⁷ Available at http://www.madoff.com/letters/mvl.asp?home=1 or in the Best Ex Guide at http://www.madoff.com/dis/display.asp?id=353&mode=1&home=1

MADF lists the factors used to determine whether to invoke the unusual market conditions as: 1) Price volatility, 2) Number of customer orders in the security, 3) Total number of customer orders, 4) ITS availability, and 5) Customer-chosen routing service provider availability. The decision to turn a feature off can only be done by senior management, not traders and notifies customers of such decisions electronically.

⁹ On January 6, 9.4% of the orders and 12.2% of the shares were disadvantaged. On January 7, 12% of the orders and 22.7% of the shares were disadvantaged. On January 8, 13% of the orders and 17.67% of the shares were disadvantaged. On January 9, 13.5% of the orders and 43.6% of the shares were disadvantaged. On January 10, 16.8% of the orders and 37.8% of the shares were disadvantaged.

suggest that MADF and its customer brokers do not or poorly monitor the quality of executions for its customers.

IV. Gain to MADF

MADF had many executions away from the inside bid or ask. While some of these were worse than the inside bid or ask, some were better. If the sum that was paid to customers above the inside bid or ask by Heard is taken from the amount paid worse than the inside bid or ask, Heard made nearly \$5,000 in this week alone from QQQ on bad executions. ¹⁰ If that number is an average figure and taken times a 52-week period, Heard made over about \$250,000 on QQQ at the expense of its customers on bad executions alone.

V. 1998 Third Market Inspection Report and Conclusion

In 1998, the Staff conducted an inspection on "third market" firms (NASDAQ firms that execute orders on listed securities) to evaluate execution quality. This inspection included MADF and also analyzed how orders are treated during locked or crossed markets. In this report, the Staff found that MADF traders would execute orders received during locked or crossed markets at the price quoted on the primary exchange before the market locked. At the time, the Staff recommended that MADF either execute the orders either at the locked price or wait until the NBBO unlocked and execute at that time. The later seems to have been adopted by MADF. However, in light of MADF apparently having the ability to execute away from the primary market as demonstrated by the data provided at the cost to the customer, a better approach may be to require MADF and other QQQ firms to execute at an ECN if the price is better and the volume is there. As has been demonstrated, there is enough liquidity at Archipelago and other ECNs to execute proprietary orders. Instead of executing proprietary orders at the better ECN price, MADF should have to pass on the better prices to the customer.

VI. Conclusion

Based on the activity outlined in this memo, the Staff believes that there is a best execution problem with MADF. The Staff further believes that MADF and its broker customers have thus far failed to adequately monitor this behavior. Based on these conclusions, the Staff recommends that a deficiency letter be sent outlining the problem areas as well recommending that MADF execute customer orders at ECNs when it is able to do so rather than proprietarily taking that price while executing the customer at a worse ITS price.

The Staff has also discovered in conversations with the specialist in QQQ at the PHLX, Heard Trading, that many of the locked or crossed conditions are created by AMEX, the primary market for QQQs. This is due to the fact that while AMEX is changing its quote, it will continue to display the stale quote at a 100 share lot. This is supposed to be a "signal" to all ITS participants that the quote is stale. What it does, however, is create the vast majority of the locked or crossed market conditions. NYSE has recently adopted this practice as well. A further

¹⁰ This number does not include the amounts that MADF made legitimately on the spread between the bid and the ask.

^{11 1998} Report page 14.

¹² Îd.

investigation of this phenomenon with AMEX and NYSE is warranted in light of the fact that it is likely remotely causing the poor executions by MADF.

APPENDEX A

MADF Best Ex Overall

Date	Share Volume	Number of Orders	Number of Shares Orders Disimproved	Orders Disimproved	Shares Disimp Percent	Orders Disimp Percent	Total Customer Loss	Total MADF Gain (Loss Per Share (Disadvantaged)	Average Ex
The Contraction	3,489,438	3,489,438 4,359	859,373	783.	25%	Assemble Character Office processing	18% \$16,261.08	(\$6,159.60)	SO.0189	\$0,0018
1/6/2003	675,511	1,042	124,016	. 168	. 18.4%	16.12%	71,796,17	(\$2,368.08)	\$0.0145	\$0.003\$
1/7/2003	634,619	903	146,576	5.4	23.1%	16.06%	% \$3,242.84	(\$569.81)	\$0.0221	\$0,0010
(/8/2003	393,142	648	71,345	105	18.15%	16.2%	% \$1,268.58	(\$1,072.79)	\$0.0178	\$0.0027
1/9/2003	952,177	857	267,082	158	28.05%	18,43%	% \$5,136.02	(\$1,205.78)	\$0.0192	\$0,0013
/10/2003	833,989	606	250,354	202	30%	22.77%	% \$4,817.47	(\$943.14)	\$0.0192	\$0.0011

Monday, November 03, 200

APPENDEX B

Customer Execution Quality, Week of January 6, 2003

Date	Share Volume	Number of Orders	Shares Disimproved	Orders Shares Disimproved Disimp Percent	Shares Disimp Percent	Orders Disimp Percent	FOJ.	Total Customer Loss	Total L MADF Gain (Loss Per Share (Disadvantaged)	Average Ex
1/10/2003	425,159	1/10/2003 425,159 546	160,740	SESTEMBLE CONTRACTOR OF SESTE SES	37.8%	NOT THE PROPERTY OF THE PROPERTY OF THE PERSON.	16.8%	\$3,134.18	\$2,194.22	\$0.0195	(\$0,0037)
1/6/2003	383,211	269	46,969	65	12.2%		9.4%	\$613.48	(\$1,212.76)	\$0.0131	\$0.0031
1/7/2003	325,354	209 1	73,929	73	22.7%		12%	\$1,298,64	\$552,00	\$0.0176	(\$0.0017)
1/8/2003	203,642	404	35,977	53	17,67%		13%	\$816.08	\$249,99	50.0227	(\$0.00[2)
1/9/2003	776,702	. 562	221,233	76	43.6%		3.5%	\$3,955.63	53,160.48	\$0.0179	(\$0.0062)
Total	Total 1,847,343	3 2,806	538,848	359	75%		78.7	10.818,03	\$4,943.93	\$0:0182	(\$0.0027)

Monday, November 10, 20